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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,378	07/30/2003	Eric J. Bergman	54008.8029.US00 P03-0016	2133
45540	7590	05/23/2006	EXAMINER	
PERKINS COIE LLP/SEMITOOL PO BOX 1208 SEATTLE, WA 98111-1208			PERRIN, JOSEPH L	
			ART UNIT	PAPER NUMBER
			1746	
DATE MAILED: 05/23/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/631,378	Applicant(s) BERGMAN ET AL.	
	Examiner Joseph L. Perrin, Ph.D.	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20031204;20050803</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-7, 9-22, 24 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,164,297 to KAMIKAWA. As shown in Figures 24 & 26 and relative associated text, KAMIKAWA discloses a process chamber (223) with draining means and removable door, a cantilever arm workpiece support (224) with grooves attached in the chamber, a fluid delivery element (237) including two spray arms (237b) and nozzles (237a) on opposite sides of the support, a rotary union with hollow shaft (237d) and fluid line (238) connecting a fluid supply valve (240) and the nozzles, a motor (237g) for rotating the fluid delivery element, a process fluid manifold (237c), and the chamber being sealed (see Figure 24 and relative associated text). Regarding method claims 21-25, the operation of the apparatus in Figures 24 & 26 read on the claimed invention including steps of rotating nozzles around the workpieces, introducing rinsing/immersing liquid and drying gas, sealing the chamber, and draining the chamber (see the Figures and relative associated text).

3. Claims 1-7, 9-14, 16-22 & 24 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 4,900,395 to SYVERSON *et al.* SYVERSON *et al.* discloses a sealable process chamber (16) with workpiece support (11) and grooves (29), plural spray arms (42) with nozzles (43) attached inside the chamber, rotary union including hollow shaft (21) with fluid line, rotary motor (39), process fluid manifold (37), removable door (18) (see Figure 2 and relative associated text). Although the apparatus appears to be shown to have a rotary workpiece support and stationary nozzles, SYVERSON *et al.* discloses in col. 6, lines 27-33 that "the rotor revolves relative to the nozzles, as illustrated, but the spraying nozzles may also be revolved around the wafer carrier ... to produce the necessary relative rotation". The position is taken that one having ordinary skill in the art would have at once envisaged the apparatus providing relative rotation either by stationary nozzles and rotary wafer carrier (as illustrated) or by rotary nozzles and stationary wafer carrier. Accordingly, recitation of SYVERSON *et al.* anticipates applicant's claimed invention. Even if, *arguendo*, one were to construe SYVERSON *et al.* as not providing such explicit teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide relative motion between a stationary objection and rotary object by reversing the relative motion of the parts (i.e. switching a rotary support and stationary nozzle to a stationary support and rotary nozzle), since it has been held that a mere reversal of the essential working parts of a device involves only routine skill in the art. *In re Einstein*, 8 USPQ 167. Moreover, in view of col. 6 of

SYVERSON *et al.*, there would be a reasonable expectation of success in reversing the working parts to achieve the desired relative motion.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 8, 23 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,119,367 to KAMIKAWA *et al.* in view of KAMIKAWA (cited above). KAMIKAWA *et al.* discloses processing chambers (11/12/13/14/21/22) for spray processing (drying/cleaning/rinsing) a workpiece including sonic energy source (24), interface section (4) and process robot (17) for transporting workpieces between the interface sections and process chambers/sections (see entire document, especially Figures 1-2 and relative associated text). KAMIKAWA *et al.* discloses a spray processing chamber but does not expressly disclose the claimed spray processing chamber having a fluid delivery element rotatable around the workpiece support. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute one spray process chamber (i.e. KAMIKAWA *et al.*) for another (i.e. KAMIKAWA) since it appears that the invention would perform equally well with other spray processing chambers and the selection of any of these known equivalents to provide enhanced cleaning/rinsing/drying to a workpiece would be within the level of ordinary skill in the art. The Examiner notes that the prior art is replete with teachings of applying sonic energy to workpieces and systems including interface sections and transfer robots, and thus, such structural components are not considered to be a point of novelty. That is, the use of such structural components for the purpose of enhancing the processing of a workpiece are well within the level and knowledge of one having ordinary skill in the art.

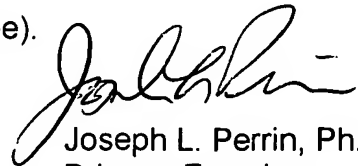
Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent No. 3,990,462 to ELFTMANN *et al.*, which is substantially cumulative to SYVERSON *et al.* cited above.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Perrin, Ph.D. whose telephone number is (571)272-1305. The examiner can normally be reached on M-F 7:00-4:30, except alternate Fridays.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael E. Barr can be reached on (571)272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Joseph L. Perrin, Ph.D.
Primary Examiner
Art Unit 1746